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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/611,403
Filing Date: July 01, 2003
Appellant(s): EMERSON ET AL.

EMERSON ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/25/2009 appealing from the Office action mailed 5/14/2009

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,990,852	Szamrej	11-1999
5,485,212	Frederick	01-1996
5,473,348	Fujimoto	12-1995

5,241,625 Epard et al. 8-1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-68 of U.S. Patent No. 6,664,969. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons given below. Please see the tables:

Table I: The mapping table of current Application and US Patent 6,664,969:

<table>
<tr><td colspan="10">Current Application 10/611,403</td><td colspan="10">U.S. Patent No. 6,664,969</td></tr>
<tr><td>1</td><td>2</td><td>3 & 4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>10*</td><td>11</td><td>12</td><td>1 & 8</td><td>2</td><td>3</td><td>4 & 5</td><td>5</td><td>6</td><td>7</td><td>9</td><td>10</td><td>11</td></tr>
<tr><td colspan="2">13</td><td>14</td><td>15</td><td colspan="2">16</td><td>17</td><td>19*</td><td>20</td><td>21</td><td colspan="2">12 & 17</td><td>13</td><td>14</td><td>15</td><td>16</td><td colspan="2">18</td><td>19</td><td>12</td></tr>
<tr><td colspan="4">22</td><td colspan="3">23</td><td colspan="3">24</td><td colspan="4">42-45, 60-65, 66</td><td colspan="3">43, 67</td><td colspan="3">68</td></tr>
<tr><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td>32</td><td>33</td><td>35</td><td>20 & 23 51</td><td>21</td><td>22</td><td>24 52</td><td>27</td><td>28 53 - 54</td><td>29</td><td>30</td><td>31</td><td>24</td></tr>
<tr><td>36</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="10">37</td><td colspan="10">20</td></tr>
<tr><td colspan="10">38</td><td colspan="10">33</td></tr>
</table>

* Claim number of current Application does not have claims "9", "18", and "34"

Table II: For example, claim 1 of current application and claim 1 of U.S. 6,664,969:

Current Application 10/611,403	U.S. Patent No. 6,664,969
1. A method for transmitting video graphics data, comprising: a processor dividing a screen into a number of blocks, the blocks having contents; the processor periodically reading, from a buffer, the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks; the processor computing a unique value for a first block based on the contents; the processor comparing the unique value for the first block to a previously computed unique value corresponding to the first block; and the processor transmitting the contents of the first block if the unique value for the first block is different from the previously computed unique value corresponding to the first block.	1. A method for transmitting video graphics data over a communications link to a remote location from a data processor including a display memory, comprising: dividing a display memory into a number of blocks, the blocks storing multibit pixel values representing video data to be displayed; periodically reading the multibit pixel values stored in a plurality of the blocks; for each block that has been read condensing the multibit pixel values to lower number bit values; computing a current signature value for each block that has been read based on the contents; comparing the current signature value for each block that has been read to a previously computed signature value corresponding to that block; and transmitting to the communication link the lower number bit value contents of each block that has been read if the current signature value for that block is different from the previously computed signature value corresponding to that block.

From the tables above, it would have been obvious to one skilled in the art to utilize the step of periodically reading the contents of the blocks so that *the contents of each one of the blocks is read over the number of passes, wherein each pass reads a different fraction of all the blocks,* since the patent '969 already teaches reading the pixel of the blocks, which is a fraction of the block.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-8, 10-11, 13-17, 19-20, 22-33, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szamrej (U.S. Patent No. 5,990,852) in view of Frederick (U.S. Patent No. 5,485,212).

As per claim 1, Szamrej teach a method for transmitting video graphics data, comprising:

a processor dividing a screen into a number of blocks, the blocks having contents (see Summary of the Invention, col. 2, lines 25-33, and Figs. 3A-C, *screen segmented into a sixteen by sixteen (16 x16) array of cells or blocks*, col. 5, lines 42-45);

the processor periodically reading, from a buffer, the contents of each one of the blocks (the monitoring thread as shown in Fig. 2A, col. 3, lines 49-65);

the processor computing a unique value for a first block based on the contents (Fig. 2A, step 28);

the processor comparing the unique value for the first block to a previously computed unique value corresponding to the first block (Fig. 2A, step 28, see col. 4, lines 24-55); and

the processor transmitting the contents of the first block if the unique value for the first block is different from the previously computed unique value corresponding to the first block (Fig. 2B, col. 4, line 65 to col. 5, line 4).

Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes, wherein each pass reads a different fraction of all the blocks.</u> However, Frederick teaches a method of transmitting video data where the frame is divided into plurality of pixel data blocks, comparing the previous stored block with the current block to find changes, and transmitting the changed block (see col. 1, line 63 through col. 2, line 35). Frederick further teaches *reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks* (col. 2, lines 13-22, i.e. reading one row of each block to compare with corresponding row of previous frame).

Since both Szamrej and Frederick teach reading the contents block by block to find the changes and transmitting the changed blocks, Frederick further teaches reading a fraction of each block until all blocks are read, it would have been obvious to one skilled in the art to utilize the method as taught by Frederick in combination with the method as taught by Szamrej in order to minimize the processing time (col. 2, lines 18-22).

As per claim 2, Szamrej further teaches:

storing the unique value for the first block in a table if the unique values are different (Steps 34 and 36, Fig. 2A); and

comparing the unique value of the first block to a unique value corresponding to a preceding block,

wherein the transmitting step transmits the preceding block and a repeat command if the unique value of the first block is equal to the unique value corresponding to the preceding block (*Szamrej teaches using run length encoding to send the blocks in groups, col. 5, lines 57-61, and the method for obtaining the optimal rectangle described in Figs. 3A-6C*).

As per claim 3, which is similar in scope to claim 2, further requires compressing the contents of the blocks, Szamrej also teaches this feature as described on column 2, lines 61-66.

As per claim 4, as cited above, Szamrej teaches compressing using run length encoding.

As per claim 5, as cited above, Szamrej teaches dividing the screen into plurality of blocks, and monitoring the changes of each of the blocks, and transmitting the changed blocks if the values representing the blocks are unequal. Thus, it is implied that the configuration information of the video graphics controller (*such as screen resolution to which the number of blocks are divided,* col. 4, lines 7-11) is periodically read to determine if the configuration information has changed and transmitting configuration changes if the configuration information has changed (In interpreting this claim language, the examiner bases his rejection on what is disclosed in the instant Application, on page 15, lines 8-11, the configuration information of video controller includes the screen resolution, see Szamrej, col. 4, lines 7-11).

As per claim 6, Szamrej teaches the screen is divided into a number of blocks, including rows and columns, based on the screen resolution (col. 4, lines 7-11), and it is inherent that the

configuration information (based on the screen resolution, as discussed above in claim 5), is read after a row of blocks is completed in order to process the change detection.

Claim 8, which is similar in scope to claim 6, is thus rejected under the same rationale.

As per claim 10, as cited above with reference to claim 1, the combined Szamrej-Callaway also teaches surrounding blocks are marked for accelerated processing (as in Szamrej, *the surrounding blocks as shown in Figs. 3E-6C are marked to find the optimal rectangle*), if during one of the passes the unique value for a given block is different from a previously computed unique value corresponding to the given block (as in Callaway, *each line (pass) is read to identify changes)*.

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Callaway in combination with the method as taught by Szamrej in order to quickly detect the changes in the host display and transmit to the remote computer (col. 5, lines 3-23).

As per claim 11, as cited above in claims 1 and 10, Szamrej-Callaway teach each pass reads a different fraction of all the blocks and any block marked for accelerated processing.

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Callaway in combination with the method as taught by Szamrej in order to quickly detect the changes in the host display and transmit to the remote computer (col. 5, lines 3-23).

As per claim 13, as cited above, Szamrej teaches a method of transmitting video graphics data comprising:

a processor dividing a screen into a number of blocks (see Summary of the Invention, col. 2, lines 25-33, and Figs. 3A-C, *screen segmented into a sixteen by sixteen (16 x16) array of cells or blocks*, col. 5, lines 42-45);

the processor reading, from a buffer, a first block and at least one subsequent block (the monitoring thread as shown in Fig. 2A, col. 3, lines 49-65);

the processor comparing the first block to a subsequent block (Fig. 2A, step 28, see col. 4, lines 24-55);

the processor developing a repeat command based on how many subsequent blocks equal the first block (*using run-length coding*); and

the processor transmitting the first block and the repeat command (see Fig. 3B, blocks with the same counter number of 1 (blocks with changes) would be sent together in group using run length encoding, col. 5, lines 40-60; see definition of <u>*run-length encoding*</u>).

Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes, wherein each pass reads a different fraction of all the blocks.</u> However, Frederick teaches a method of transmitting video data where the frame is divided into plurality of pixel data blocks, comparing the previous stored block with the current block to find changes, and transmitting the changed block (see col. 1, line 63 through col. 2, line 35). Frederick further teaches *reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks* (col. 2, lines 13-22, i.e. reading one row of each block to compare with corresponding row of previous frame).

Since both Szamrej and Frederick teach reading the contents block by block to find the changes and transmitting the changed blocks, Frederick further teaches reading a fraction of each block until all blocks are read, it would have been obvious to one skilled in the art to utilize the method as taught by Frederick in combination with the method as taught by Szamrej in order to minimize the processing time (col. 2, lines 18-22).

Claim 14, which is similar to claim 5, is thus rejected under the same rationale.

Claim 15, which is similar to claim 6, is thus rejected under the same rationale.

Claim 16, which is similar to claim 7, is thus rejected under the same rationale.

Claim 17, which is similar in scope to claim 6, is thus rejected under the same rationale.

Claim 19, which is similar in scope to claim10, is thus rejected under the same rationale.

Claim 20, which is similar in scope to claim 11, is thus rejected under the same rationale.

As per claim 22, Szamrej teaches a method of transmitting video graphics data comprising:

the processor dividing a screen into a number of blocks (screen segmented into a sixteen by sixteen (16 x16) array of cells or blocks, col. 5, lines 42-45);

the processor reading a first block of the screen (the monitoring thread as shown in Fig. 2A, col. 3, lines 49-65);

the processor compressing the first block (col. 2, lines 61-66);

the processor reading, from a buffer, a second block of the screen (col. 2, lines 61-66);

the processor comparing the first block to the second block (Fig. 2A, step 28, see col. 4, lines 24-55);

the processor compressing the second block with the first block if the first and second blocks are not equal; and transmitting the compressed blocks (col. 2, lines 25-33, and lines 61-66).

Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes, wherein each pass reads a different fraction of all the blocks.</u> However, Frederick teaches a method of transmitting video data where the frame is divided into plurality of

pixel data blocks, comparing the previous stored block with the current block to find changes, and transmitting the changed block (see col. 1, line 63 through col. 2, line 35). Frederick further teaches *reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks* (col. 2, lines 13-22, i.e. reading one row of each block to compare with corresponding row of previous frame).

Since both Szamrej and Frederick teach reading the contents block by block to find the changes and transmitting the changed blocks, Frederick further teaches reading a fraction of each block until all blocks are read, it would have been obvious to one skilled in the art to utilize the method as taught by Frederick in combination with the method as taught by Szamrej in order to minimize the processing time (col. 2, lines 18-22).

Claim 23, which is similar in scope to claim 4, is thus rejected under the same rationale.

Claim 24, which is similar in scope to claims 10-11, is thus rejected under the same rationale.

As per claim 25, Szamrej teaches a computer system for communicating with a remote console (Fig. 1), comprising:

a video graphics controller having a frame buffer (not shown but inherently included in a typical computer system);

a communications device (network 12); and

a processor coupled to the video graphics controller and the communications device, the processor configured to: divide the frame buffer into a number of blocks (as cited above);

periodically read the frame buffer and determine whether any of the blocks have changed since a previous reading (reading the contents of the video memory, col. 3, lines 55-65); and

transmit changed blocks to the remote console via the communications device (as cited above).

Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes, wherein each pass reads a different fraction of all the blocks.</u> However, Frederick teaches a method of transmitting video data where the frame is divided into plurality of pixel data blocks, comparing the previous stored block with the current block to find changes, and transmitting the changed block (see col. 1, line 63 through col. 2, line 35). Frederick further teaches *reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks* (col. 2, lines 13-22, i.e. reading one row of each block to compare with corresponding row of previous frame).

Since both Szamrej and Frederick teach reading the contents block by block to find the changes and transmitting the changed blocks, Frederick further teaches reading a fraction of each block until all blocks are read, it would have been obvious to one skilled in the art to utilize the method as taught by Frederick in combination with the method as taught by Szamrej in order to minimize the processing time (col. 2, lines 18-22).

As per claim 26, Szamrej also teaches a hash code (cyclic redundancy code, as defined in paragraph 53 of the Specification) is calculated and stored for each block when the block is first read, and wherein subsequent changes are determined for a given block by calculating a new hash code and comparing the new hash code to the stored hash code (col. 2, lines 34-46, and col. 4, lines 24-37).

Claim 27, which is similar in scope to claim 13, is thus rejected under the same rationale.

Claim 28, which is similar in scope to claims 25 and 26, is thus rejected under the same rationale.

Claim 29, which is similar in scope to claim 4, is thus rejected under the same rationale.

Claim 30, which is similar in scope to claim 5, is thus rejected under the same rationale.

Claim 31, which is similar in scope to claim 6, is thus rejected under the same rationale.

Claim 32, which is similar in scope to claim 7, is thus rejected under the same rationale.

Claim 33, which is similar in scope to claim 6, is thus rejected under the same rationale.

Claim 35, which is similar in scope to claim 10, is thus rejected under the same rationale.

Claim 36, which is similar in scope to claim 11, is thus rejected under the same rationale.

Claim 37, which is similar in scope to claim 25, is thus rejected under the same rationale.

Claim 38, which is similar in scope to claims 25 and 26, is thus rejected under the same rationale.

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Szamrej (U.S. Patent No. 5,990,852) in view of Frederick (U.S. Patent No. 5,485,212), and further in view of Epart et al. (U.S. Patent No. 5,241,625, "Epard", hereinafter).

As per claim 7, although the combined Szamrej-Frederick does not explicitly teach *periodically reading information of a pointing device to determine the changes, and transmitting configuration changes if the position has changed,* this is taught by Epard (see col. 36, lines 55-59, and col. 61, lines 38-52).

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Epard in combination with the method as taught by Szamrej-Frederick in order to monitor changes caused by an input device.

3. Claims 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szamrej (U.S. Patent No. 5,990,852) in view of Frederick (U.S. Patent No. 5,485,212), and further in view of Fujimoto (U.S. Patent No. 5,473,348).

As per claim 12, Szamrej teaches the blocks contain color value (col. 1, lines 20-25). The combined Szamrej-Frederick reference fails to teach *condensing the color values into 6-bit red-green-blue color values before computing the unique values.* However, it is well-known in the art at the time the invention was made to convert the color values of pixels into 6-bit RGB as described in Fujimoto col. 7, lines 31-35, the advantage of which is to reduce the amount of data per pixel in order to transmit over a low bandwidth network.

Claim 21, which is similar in scope to claim 12, is thus rejected under the same rationale.

(10) Response to Argument

Applicant's arguments filed 01/27/2009 have been fully considered but they are not persuasive. In response to Applicant's arguments that the cited reference fails to teach *reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks*, the examiner respectfully disagrees. In fact, Frederick, which is used as a secondary reference, discloses on col. 2, lines 2-22:

> ...the data of sequential frames of the signal are arranged in a plurality of blocks of pixel data that numerically represent visual characteristics of the respective pixels of the frame image. Each block is further organized as a matrix of pixel data.
> The pixel data of the blocks of a "previous" video frame are stored in a memory. The "previous" video frame may constitute an earlier received frame that has been updated in order to reflect changes in the

> pixel data that has already been transmitted to the receiver. Corresponding blocks of a currently received frame video signals from the video source are also stored. *A row (or column) of each block of the current video signal is compared with the corresponding row* (or column) of *the previous video frame*, and when a comparison reveals that changes in any block exceed a predetermined threshold, that block is listed as a "changed" block. While only one row of each block is compared in the processing of each current, *in order to minimize the processing time, other rows of the respective blocks are sequentially compared in the processing of subsequent video frame* (emphasis added, col. 2, lines 2-22).

Thus, from the excerpt above, rows (fractions) of *all the blocks* of the current frame that are read over a period of time, not just one row of any block, in order to save time.

In regard to Applicant's arguments to claim 5, the examiner also disagrees. Since Szamrej teaches the *number of blocks* is dependent upon the screen resolution, and if the screen resolution is changed (configuration information changes), the reading, detecting changes, and transmitting is changed accordingly.

Since the cited reference meets the minimum requirements of the claims, rejection is maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Hau H Nguyen/

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